

4121-107 RCE

In response to the December 4, 2001 Office Action, please amend the application as follows:

In the Claims¹

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GROUP 1600

Please amend claims 14, 49, 50, 51, 52, 53, 61 and 65 to read as follows:

14. (Twice Amended) An adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of L1-ORF, L2-ORF and fragments of any of the foregoing ORFs; and

an early papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of: E1-ORF, E2-ORF, E4-ORF, E5-ORF, E6-ORF, E7-ORF and fragments of any of the foregoing ORFs, wherein said early papillomavirus polypeptides or fragments thereof are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide.

49. (Twice Amended) An adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural human papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of L1-ORF and L2-ORF; and

an early human papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of: E1-ORF, E2-ORF, E4-ORF, E5-ORF, E6-ORF and E7-ORF, wherein said early human papillomavirus polypeptides are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide.

¹ Applicants have provided a marked-up version of the amended claims 14, 49, 50, 51, 52, 53, 61 and 65 in Appendix A, and a clean set of all pending claims, amended to date, in Appendix B.

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50. (Twice Amended) An adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural human papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of L1-ORF and L2-ORF; and

an early human papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of: E1-ORF, E2-ORF, E4-ORF, E5-ORF, E6-ORF and E7-ORF, wherein said early human papillomavirus peptides are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide, and the human papillomavirus of (a) and (b) is selected from the group consisting of HPV 16, HPV 18, HPV 33, HPV 35 and HPV 45.

51. (Twice Amended) An adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural human papillomavirus polypeptide encoded by L1-ORF or a fragment thereof; and

an early human papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of: E6-ORF, E7-ORF and fragments of any of the foregoing ORFs, wherein said early human papillomavirus polypeptides are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide.

52. (Twice Amended) An adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural human papillomavirus polypeptide encoded by an HPV16 or 18 L1-ORF or a fragment thereof; and

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an early human papillomavirus polypeptide encoded by an HPV 16 or 18 open reading frame selected from the group consisting of E6-ORF, E7-ORF and fragments of any of the foregoing ORFs, wherein said early human papillomavirus polypeptides are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide.

53. (Twice Amended) An adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural human papillomavirus polypeptide encoded by HPV16 or 18 L1-ORF; and

an early human papillomavirus polypeptide encoded by an HPV 16 or 18 open reading frame selected from the group consisting of: E6-ORF and E7-ORF, wherein said early papillomavirus polypeptides are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide.

65. (Twice Amended) A method for activating an immune system of a subject comprising administering to the subject an adeno-associated virus vector comprising a nucleotide sequence encoding a fusion polypeptide, the fusion polypeptide comprising:

a structural papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of: L1-ORF, L2-ORF and fragments of any of the foregoing ORFs; and

an early papillomavirus polypeptide encoded by an open reading frame selected from the group consisting of: E1-ORF, E2-ORF, E4-ORF, E5-ORF, E6-ORF, E7-ORF and fragments of any of the foregoing ORFs, wherein said early papillomavirus polypeptides are non-transforming, and wherein the 3' end of the structural ORF is ligated to the 5' end of the non-transforming ORF to encode for the fusion polypeptide having a C-terminus of the structural polypeptide connected to a N-terminus of the non-transforming polypeptide.

Please cancel claims 62-64.